NEWS RELEASE

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Note to Journalists: An early view of the paper is available online at http://onlinelibrary.wiley.com/doi/10.1111/1475-6773.12176/abstract

Low-risk patients three times less likely to be admitted to hospital in medication therapy management (MTM) study of home-health patients

WEST LAFAYETTE, Ind. — Low-risk Medicare patients entering home health care who received medication therapy management by phone were three times less likely to be hospitalized within the next two months, while those at greater risk saw no benefit, according to a study led by Purdue University.

The study helped determine which patients benefit most from medication therapy management by phone and a way to identify them through a standardized risk score, said Alan Zillich, associate professor of pharmacy practice at Purdue, who led the research.

"Hopefully, this study will help home health care providers target the intervention to those who it will help and improve patient health," he said. "It also tells us there are some patients for whom medication therapy management by phone doesn't work and that we need a different strategy to help these patients."

In medication therapy management a pharmacist evaluates the medications prescribed and how a patient is feeling to identify and resolve issues, including untreated conditions, drug interactions, adverse drug reactions, inappropriate drugs or doses and whether a patient is taking the medications as prescribed.

"We know that medication therapy management (MTM) improves adherence, improves outcomes and improves lives," said Patrick Dunham, CEO of Curant Health, which provided the medication therapy management interventions. "Reducing hospital admissions for the lowest-risk patients in this study by 86 percent is another powerful proof point for the value of MTM and its capability to simultaneously reduce costs and improve care across the health care continuum."

As Medicare may add incentives or penalties for home health care providers based on hospitalization rates, studies of medication management models could influence policy, Zillich said.
"Enhancing the quality of care for patients has always been the goal of health care providers, but the growing costs of Medicare and health care in general have put an even brighter spotlight on strategies to improve patient outcomes and reduce unnecessary costs," he said. "Medication therapy management is considered a valuable tool in this effort, but the best way to deliver it and the patients whom it will most benefit have not been well studied."

Zillich led a team of researchers who collaborated with the home health care organization Amedisys Inc., and pharmacists from Curant Health (formerly HealthStat Rx), who provided the medication therapy management intervention. A paper detailing the research was published in the journal Health Services Research and is available online. Amedisys Inc. funded the research.

"Just as we hypothesized, post-acute care interventions can make a positive impact on preventing issues the elderly may have with their complicated medication regimes: ultimately resulting in lower admissions," said Dr. Michael Fleming, chief medical officer for Amedisys.

The study followed 895 patients from 40 Amedisys home health care centers throughout the United States, with 415 receiving the intervention.

The intervention consisted of an initial phone call by a pharmacy technician to verify active medications, a pharmacist-provided medication regimen review and follow-up phone calls from a pharmacist one week later and as needed for 30 days.

The most common types of medication-related errors are identified soon after transitions of care take place and the first days are the most critical, Zillich said.

"Time is of the essence," he said. "The transition to home-based care - as with any type of transitions in care - is a vulnerable time for patients. It involves a switch in health care providers and sometimes a delay in the handoff of medical records. The patients likely have had significant changes or additions to their medications, and sometimes medication-related problems are just starting to appear."

The results showed no overall significant difference in the 60-day probability of hospitalization for those who received medication management therapy by phone versus those who did not. However, when the patients were evaluated based on their risk profiles, those in the lowest-risk group who received the service were three times more likely to remain out of the hospital 60 days after entering into home health care.

A patient's risk of hospitalization was determined through a standard set of nursing assessment items used by all Medicare-certified home health agencies called the "Outcome and Assessment Information Set" or OASIS-C, and the patients were divided into four risk categories.

"Most elderly patients requiring home health care are dealing with multiple chronic conditions and taking multiple medications," Zillich said. "When we say "low-risk" patients in this context, we are talking about the least sick of a very sick group of patients. I'm not sure why they benefited so much from this intervention while the other groups did not. One theory is that they are
better able to receive and retain guidance from a pharmacist over the phone and perhaps face-to-face medication therapy management would better help the higher-risk patients."

The team plans to further explore intervention models that would be more effective for the higher-risk Medicare patients entering into home health care.

In addition to Zillich, authors of the paper include Margie Snyder, assistant professor of pharmacy practice at Purdue; Caitlin Frail, assistant professor of pharmacy at the University of Minnesota; Julie Lewis, former vice president of research and development for Amedisys Inc.; Donny Deshotels, director of analytics for Amedisys Inc.; Patrick Dunham, BSEE president and CEO of Curant Health; Heather Jaynes, research coordinator for Purdue's Department of Pharmacy Practice; and Jason Sutherland, associate professor in the School of Population and Public Health at the University of British Columbia.

Curant Health is a health care company that combines multiple patient-care processes to support individuals living with a chronic condition. Specially trained patient care managers and pharmacists form the foundation of the program and leverage MedPlan(™), Curant's enhanced, in-house electronic medical record. More information about the company is available at http://www.curanthealth.com/

Amedisys Inc. is a leading health care at home company delivering personalized home health and hospice care to more than 360,000 patients each year. More than 2,200 hospitals and 61,900 physicians nationwide have chosen Amedisys as a partner in post-acute care. For more information about the Company, visit: http://www.amedisys.com

The University of British Columbia (UBC)'s School of Population and Public Health is one of the most research-intensive units at UBC, with a long history of public health engagement, the School offers six graduate-level academic programs, as well as a residency program. For more information, visit http://www.spph.ubc.ca

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PHOTO CAPTION: Alan Zillich
ABSTRACT

A randomized, controlled pragmatic trial of telephonic medication therapy management to reduce hospitalization in home health patients

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Objective: To evaluate the effectiveness of a telephonic medication therapy management (MTM) service on reducing hospitalizations among home health patients.

Setting: Forty randomly selected, geographically diverse home healthcare centers in the United States.

Design: Two-stage, randomized, controlled trial with 60-day follow up. All Medicare-insured home healthcare patients were eligible to participate. Twenty-eight consecutive patients within each care center were recruited and randomized to usual care of MTM intervention. The MTM intervention consisted of the following: 1) initial phone call by a pharmacy technician to verify active medications, 2) pharmacist-provided medication regimen review by telephone, and 3) follow-up pharmacist phone calls at day seven and as needed for 30 days. The primary outcome was 60-day all-cause hospitalization.

Data Collection: Data were collected from in-home nursing assessments using the OASIS-C. Multivariate logistic regression modeled the effect of the MTM intervention on the probability of hospitalization while adjusting for patients' baseline risk of hospitalization, number of medications taken daily, and other OASIS-C data elements.

Principal Findings: A total of 895 patients (intervention n=415, control n=480) were block-randomized to the intervention or usual care. There was no significant difference in the 60-day probability of hospitalization between the MTM intervention and control groups (Adjusted OR: 1.26, 95% CI:0.89-1.77, p=0.19). For patients within the lowest baseline risk quartile (n=232), the intervention group was three times more likely to remain out of the hospital at 60 days (Adjusted OR: 3.79, 95% CI:1.35-10.57, p=0.01) compared to the usual care group.

Conclusions: This MTM intervention may not be effective for all home health patients; however, for those patients with the lowest-risk profile, the MTM intervention prevented patients from being hospitalized at 60 days.